

PATENT APPLICATIONIn the claims:

1-57. (Cancelled).

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58. (currently amended) A method for identifying a compound which decreases the activity of osteoprotegerin binding protein (OPGbp) of Figure 4 (SEQ ID NO:4) comprising: adding the compound to an assay under conditions where the compound binds OPGbp of Figure 4 (SEQ ID NO:4) or a soluble form thereof; and measuring the activity of OPGbp, wherein a decrease in osteoclast formation in the presence of the compound indicates that the compound decreases the activity of OPGbp.

59. (currently amended) The method of Claim 58-43 wherein the compound binds to OPGbp of Figure 4 (SEQ ID NO:4) or a soluble form thereof.

60. (currently amended) The method of Claim 58-43 wherein the compound binds to OPGbp and blocks binding of OPGbp to human ODAR.

61. (currently amended) The method of Claim 58-43 wherein the compound binds to an extracellular domain of human OPGbp comprising residues 69-317 as shown in SEQ ID NO:4 or a fragment thereof.

62. (currently amended) The method of Claim 58-43 wherein the activity of OPGbp being measured is osteoclast formation.

63. (currently amended) The method of Claim 58-43 wherein osteoclast formation is measured in a cell culture assay.

64. (currently amended) The method of Claim 58-43 wherein osteoclast formation is measured in vivo.

65. (currently amended) The method of Claim 58-43 wherein a decrease in osteoclast formation results in an increase in bone density.

66. (currently amended) The method of Claim 58 43 wherein the compound increases bone density.

67. (currently amended) The method of Claim 58 43 wherein the compound decreases bone resorption.

68. (currently amended) The method of Claim 58 43 wherein the compound is an antibody or fragment thereof.

69 – 70. Cancelled.